

REMARKS

The Examiner has indicated that co-pending application referenced on pages 3 and 10 must be updated. Applicant submits that U.S. Application Serial No. 09/847,264 is currently pending, therefore the status is accurate as currently presented. Applicant will update the status upon issuance.

The Examiner has also objected to the specification as failing to provide proper antecedent basis for the phrase "locking mechanism", as used in previous Claim 1. Applicant respectfully submits that in light of the foregoing amendments, this objection is now moot.

Applicant acknowledges the Examiner's allowance of Claims 8-13.

Claims 1, 4, 6 and 7 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Satzler et al., United States Patent No. 5,286,044 in view of Becker et al., United States Patent No. 6,267,459. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Satzler et al. in view of Becker et al. as applied to Claim 4 and further in view of Storm, United States Patent No. 3,556,455. Reconsideration of all rejected Claims is respectfully requested.

Satzler et al. discloses, with particular reference to FIGS. 1, 3, 4, 5, and 6, each of the first wheel assemblies 34 includes a swing link assembly 118, a spindle 120 which is non-rotatably connected to the swing link assembly 118 and first and second spaced wheels 122,124 rotatably mounted on the spindle 120. A first means 126 provides for pivoting the swing link assembly 118 and each first wheel assembly 34. A second means 128 provides for locking the first means 126 in any adjusted position. The first means 126 includes a connecting lever 130 which has a first end portion 132 connected to the swing link assembly 118, and a second end portion 134 which is enclosed within the first frame member 16. The second end portion 134 has first and second side surfaces 136,138 which are engaged respectively by first and second threaded adjusting screws 140,142. The adjusting screws 140,142 are threadably secured to the first frame member 16 by first and second threaded bushings 144,146 which are welded or otherwise permanently connected to the first and second sides 148,150 of the first frame member 16. The screws 140,142 are adapted to bear against the respective first and second side surfaces 136,138 of the connecting lever 130 as they are threaded into the respective threaded bushings

144,146. As one or the other adjusting screws 140,142 are tightened against the connecting lever 130, the lever 130 pivots about a threaded fastener 162. This changes the angle of the wheel assembly 34 relative to the belt 40 to provide an alignment function. The threaded fastener 162, a nut 164, and a spacer 166 hold the lever 130 within the first frame member 16. The swing link assembly 118 includes first and second spaced ear plates 168,170, first and second sleeves 172,174 positioned between the ear plates 168,170, and first and second pivot pins 176,178 which are adapted to penetrate the first and second plates 168,170 and the first and second sleeves 172,174 respectively, and to interconnect the first plate 168 to the second plate 170. First and second threaded fasteners 180,182 join the first and second pivot pins 176,178 respectively to the first ear plate 168 and third and fourth threaded fasteners 184,186 join the first and second pivot pins 176,178 respectively to the second ear plate 170. The axis 188,190 of the first and second threaded fasteners 180,182 are in substantial alignment with the respective central axis 192,194 of the first and second pivot pins 176,178. However, to prevent the pivot pins 176,178 from rotating during movement of the swing link assembly 118, the axis 196,198 of the third and fourth threaded fasteners 184,186 are offset from the respective central axis 192,194 of the first and second pivot pins 176,178. With particular reference to FIGS. 1,3, and 7, a recoil and belt tensioning mechanism 200 for each of the flexible belts 40,42 includes an air spring 202 having first and second end portions 204,206 and a recoil link 208 having first and second end portions 210,212. The first end portion 204 of the air spring 202 is connected to the first frame member 16 and the second end portion 206 is connected to the second end portion 212 of the recoil link 208 which is connected by the pivot pin 176 to the swing link assembly 118 and thereby to the first wheel assembly 34. See generally, Column 4, line 31-Column 5, line 39.

Becker et al. discloses, with reference to the drawings, the subject invention is particularly useful on work vehicles, which are supported and are propelled on track roller assemblies 14 that utilize endless rubber belts 16. In operation the track laying work machine 10 traverses different terrain and performs maneuvers subjecting the endless rubber belt 16 of each track roller assembly 12 to different forces. For example, when the track laying work machine 10 travels along side slopes, the weight of the track laying work machine 10 pulls against the endless rubber belt 16, and causes the endless rubber belt 16 to be pulled in a direction down hill of the slope being traversed. The pulling force deforms or bows the endless rubber belt 16 in the direction indicated by the arrow labeled "F" in FIG. 5. When the track laying work machine 10 is

maneuvering a turn, a similar force is exerted causing the endless rubber belt 16 to deform in the direction of "F" outward and away from the direction of the turn. Both of these examples pull on the endless rubber belt 16 and tend to pivot or rotate the idler wheel assembly 32, in the direction indicated by the arcuate arrow labeled "P", about the axis 130 defined by the first and second connecting pins 120, 122. The deformation of the endless rubber belt 16 causes the sidewall of the groove 28 or the protrusion 29 to contact the roller element 142. The contact causes the endless rubber belt 16 to apply a force, indicated by the arrow labeled "AF", against the roller element 142. The force acts on the lever member 108 rotating the block portion 110 of the second aligning mechanism 100 about the axis 130 in a direction opposite of the direction indicated by force "AF". The harder the endless rubber belt 16 pushes against roller element 142, due to the inclination of a side slope or abruptness of a turn, the more the lever member 108 opposes the tendency for the idler wheel assembly 32 to pivot. Thus, the automatic belt aligning mechanism 154 automatically maintains alignment and opposes the tendency of "throwing" a belt during operation of the track laying work machine 10. The automatic aligning mechanism 154 utilizes first and second aligning mechanisms 70, 100 and a lever member 108 for connecting the idler wheel assembly 32 to the roller frame 14. With the roller element 142 positioned at the end of the arm portion 140 of the lever member 108 and in communication with the groove 28 or protrusion 29 undue wear of the endless rubber belt 16 is also reduced. See Column 4, lines 6-46.

Amended Claim 1 is patentable by calling for a track assembly comprising, among other features, a first pivot assembly operably connected to the frame, a second pivot assembly operably connected to the frame, a shaft linking the first and second pivot assemblies, a first elongated spindle connected to said second pivot assembly to pivot on a first roll axis, a third pivot assembly operably connected to the frame, a second elongated spindle connected to said third pivot assembly to pivot on a second roll axis independent of said first roll axis, a first idler wheel rotatably mounted to said first elongated spindle and a second idler wheel rotatably mounted to said second elongated spindle.

Satzler and Becker, alone or in combination, do not disclose a track assembly as set forth in amended Claim 1, including a first pivot assembly linked to a second pivot assembly by a shaft, and having a first elongated spindle connected to the second pivot assembly to pivot on a

first roll axis, and a second elongated spindle connected to a third pivot assembly to pivot on a second roll axis. Satzler discloses a swing link assembly 118, a spindle 120 which is non-rotatably connected to the swing link assembly 118 and first and second spaced wheels 122,124 rotatably mounted on the spindle 120, as well as a first means 126 that provides for pivoting the swing link assembly 118 and each first wheel assembly 34. A second means 128 is provided for locking the first means 126 in any adjusted position. Thus Satzler discloses only a single pivot assembly. Becker discloses an endless rubber belt 16 that applies a force, indicated by the arrow labeled "AF", against the roller element 142, which force acts on the lever member 108 rotating the block portion 110 of the second aligning mechanism 100 about the axis 130 in a direction opposite of the direction indicated by force "AF". The harder the endless rubber belt 16 pushes against roller element 142, due to the inclination of a side slope or abruptness of a turn, the more the lever member 108 opposes the tendency for the idler wheel assembly 32 to pivot. Becker does not disclose a track assembly having three pivot assemblies for pivotably rotating two spindles along two roll axis. Accordingly, amended Claim 1 is patentable over the prior art references of record in the application.

In addition, Amended Claim 1 provides advantages over prior assemblies. In particular, the pivot assemblies permit the idler wheels to tilt along with the continuous track as the tread passes over uneven ground (i.e., along the roll axis). As a result, the weight of the cart carried by the track assembly remains evenly distributed across the entire width of the tread, rather than being localized. This reduces stress on the tread and spindles and other components, and improves handling.

Claims 4-7, and new Claims 14 and 15 depend from Claim 1 and are patentable for the same reasons as Claim 1, and by reason of the additional features set forth respectively therein.

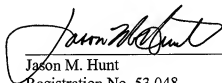
CONCLUSION

In view of the above amendments and remarks, it is respectfully submitted that this Application is in condition for allowance and such action is earnestly solicited. However, should the Examiner have any further point of objection, the Examiner is urged to contact the undersigned so that a mutual agreement with respect to claim limitations can be reached.

Respectfully submitted,

Date: _____

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